

CHEMIST

DEFINITION: Under general direction, performs work of considerable difficulty in the investigation, analysis, and interpretation of the composition, molecular structure and properties of chemical substances; provides expert advice and assistance on a wide range of chemistry matters; performs related work as assigned.

ESSENTIAL FUNCTIONS: This list is ILLUSTRATIVE ONLY and is not a comprehensive listing of all functions and tasks performed by incumbents of this class.

TASKS:

Conducts research, analysis and synthesis of environmental samples such as air, water, soil, etc. for the identification and quantification of categorical organic substances; analyzes organic and inorganic compounds to determine chemical and physical properties utilizing techniques such as gas/liquid chromatography, spectroscopy, spectrophotometer, ultraviolet and infrared spectrophotometers. Extracts and analyzes organic and inorganic compounds to determine chemical and physical properties.

Extracts and analyzes environmental samples for the isolation, identification, and quantification of organic substances such as herbicides, pesticides, polychlorinated, biphenyls, etc. Extracts petroleum products, industrial solvents and radioactive species; applies specified procedures of analytical quality control including frequent analysis of replicates, spikes, reference samples, reagent blanks, etc and ensures precision and accuracy of analytical data; interacts with specialists in contributory fields such as aquatic biology, microbiology, health physics and engineering.

Prepares reports identifying the sample, showing the methods and procedures used, any interpretation, and whether the sample appears to be in violation of any agency regulation; evaluates and interprets the results to draw conclusions and to ensure the data needed has been obtained and is valid; prepares a report describing the results, conclusions, and if appropriate, a recommended solution to the problem.

Reviews scientific literature pertinent to assignments and keeps abreast of new developments in the field of analytical chemistry; keeps all instrumentation functional and performs general maintenance and calibration as required; attends meetings, seminars, conferences, and in-service sessions; develops budgetary needs for the program; coordinates and conducts technical meetings with staff and project participants.

KNOWLEDGE, SKILLS AND OTHER CHARACTERISTICS:

Knowledge of chemical principles, theories, practices, and established methodology.

Knowledge of proper chemical testing methods. Knowledge of chemical and physical analysis.

Knowledge of problems that involve special requirements for adaptation and modification.

Knowledge of instruments and equipment used in chemistry laboratories.

Skill in operating instruments and equipment used in chemistry laboratories.

Skill in calibrating highly sensitive equipment/instruments.

Skill in evaluating data and drawing valid conclusions.

Skill in establishing effective working relationships.

Skill in applying logic to chemical and physical analysis.

Skill in analyzing and selecting the most appropriate method, technique, procedure or test.

PHYSICAL REQUIREMENTS AND WORK ENVIRONMENT: Work involves concentrated work in a professional laboratory with highly sensitive instruments and equipment.

THE NAVAJO NATION

Class Code: 3247
Natural Resources and Parks Series
Biological Science Group
Overtime Code: Exempt
Pay Grade: 65

CHEMIST

MINIMUM QUALIFICATIONS:

- A Bachelor's degree in Chemistry or a closely related field; and two (2) years professional experience or as a chemist, physicist.

PREFERRED QUALIFICATIONS:

- A Master's degree in Chemistry or a closely related field.
- Two (2) years professional Environmental Science including project management
- Proficient in Microsoft Office software or other computer applications.

Depending upon the needs of the Nation, some incumbent s may be required to demonstrate fluency in both the Navajo and English languages as a condition of employment.